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IMPLICATION OF NON-COMPLETION PROJECTS IN MALAYSIA

■ **ABSTRACT:**

The construction industry continues to occupy an important position in the nation's economy even though it contributes less than the manufacturing or other service industries. The contribution of the construction industry to national economic growth necessitates improved efficiency in the industry by means of cost-effectiveness and timelines and would certainly contribute to cost savings for the country as a whole. A major criticism facing the construction industry is the growing rate of delays in project delivery. Delay is a situation when the contractor and the project owner jointly or severally contribute to the non-completion of the project within the original or the stipulated or agreed contract period. Thus, this paper is investigated the implication of non-completion in construction projects in Malaysia.

■ **KEYWORDS:**

Projects, Implications, Non-completion, Delay, Malaysia

INTRODUCTION

The construction industry continues to occupy an important position in the nation's economy even though it contributes less than the manufacturing or other service industries. The contribution of the construction industry to national economic growth necessitates improved efficiency in the industry by means of cost-effectiveness and timelines and would certainly contribute to cost savings for the country as a whole. A major criticism facing the construction industry is the growing rate of delays in project delivery. Delay is a situation when the contractor and the project owner jointly or severally contribute to the non-completion of the project within the original or the stipulated or agreed contract period. In countries such as United State of America (USA), United Kingdom (UK) and Western Germany, Mobbs (1982) found that 'construction time' is better. The Construction Sector is one of the important sectors that contribute to Malaysia's economic growth. The sector accounted for nearly 3.3% of GDP in the year 2005 and employed about 600,000 workers including 109,000 foreign workers (MALBEX, 2005). The huge volume and complexity of projects in Malaysia's construction sector pose a great challenge and provide a wealth of opportunities to various companies in the construction industry. In Nigeria, Ajanlekoko (1987) observed that the performance of the construction industry time wise is poor. An investigation by

Odeyinka and Yusif (1997) shows that seven out of ten projects surveyed suffered delays in their execution. According to Chan and Kumaraswamy (1993) timely delivery of projects within budget and to the level of quality standard specified by the client is an index of successful project delivery. When projects are delayed, they are either accelerated or have their duration extended beyond the scheduled completion date. These are not without some cost consequences. The conventional approach to managing the extra cost is to include a percentage of the project cost as contingency in the pre-contract budget. According to Akinsola (1996) conventional allocation of contingency is based on judgment. However construction projects are unique; as they may have a distinctive set of objectives, require the application of new technology or technical approaches to achieve the required result. This uniqueness makes the contingency allowance allocation based on assumption and intuition inadequate and unrealistic. An investigation by the authors revealed that in Nigeria 5-10% of pre-contract estimate is in most cases allowed as contingency. This allowance was found to be inadequate. Inadequate contingency implies extra financial commitments, which in some cases are beyond the capacity of the owner. Clients are in some cases not prepared for such extra cost and so fund inform of loan are sought to offset the unexpected costs.

PROJECT NON-COMPLETION/ABANDONMENT AND DELAY

Construction projects have been managed since time immemorial. Traditionally this was the responsibility of the “master of the works” - a concept retained in the modern French. It emerged as industrial societies started to build complex systems such as rail and power networks. Projects are classically defined by the need to complete a task on time, to budget, and with appropriate technical performance/quality. In recent decades, projects have tended to become more time-constrained, and the ability to deliver a project quickly is becoming an increasingly important element in winning a bid. There is an increasing emphasis on tight contracts, using prime contractor ship to pass time-risk onto the contractor.

i. Project Delay

Failure to complete a complete a project either by the original planned time or budget, or both, ultimately results in project delay. The social and economic costs of delay can be staggeringly high and to a certain extent cannot be absorbed by the industry. When a delay can no longer be absorbed by the client, it will result in the project being abandoned. Thus, it is important to predict and identify problems in the early stages of construction and diagnose the main causes and implement the most appropriate and economical solutions to prevent further negative impacts of delay. In construction, delay could be defined as the time over run either beyond completion date specified in a contract, or beyond the date that the parties agreed upon for delivery of a project. It is a project slipping over its planned schedule and is considered as common problem in construction projects. To the owner, delay means loss of revenue through lack of production facilities and rent-able space or a dependence on present facilities. In some cases, to the contractor, delay means higher overhead costs because of longer work period, higher material costs through inflation, and due to labor cost increases. Completing projects on time is an indicator of efficiency, but the construction process is subject to many variables and unpredictable factors, which result from many sources. These sources include the performance of parties, resources availability, environmental conditions, involvement of other parties, and contractual relations. However, it is rarely happen that a project is completed within the specified time. Stumpf (2000) defined delay as an act or event that extends the time required to perform the tasks under a contract. It usually shows up as additional days of work or as a delayed start of an activity. He showed, in his article, that delay does matter, and that different methods for analyzing schedule delay lead to different results for the owner and contractor. Construction delays became an integral part of the project's construction life. Even with today's advanced technology, and management understanding of project management techniques, construction projects continue to suffer delays and project completion dates still get pushed back (Stumpf, 2000).

ii. Project non-completion/Abandonment

There are several stages, as defined by the ministry, before a project is declared abandoned. If it has passed its promised delivery date by 10%, it is considered late; if the delay stretches beyond 10%-30%, then it is considered ‘sick’; and finally, if no work has been carried out or no workers are on the project site for up to six months, then it is deemed abandoned (The star, 2009). Abandoned housing development means where a licensed housing developer had refused to carry-out or delayed or suspended or stopped or ceased works continuously for a period of six months or more or beyond the stipulated period of completion as agreed under a sales and purchase agreement (Sabah, 2005). A housing project is classified as “abandoned” by the Ministry of Housing and Local Government (MHLG) when there is no activity at the project site, continuously, for more than six months after the expected date of delivery of vacant possession. This is based on the date of the first Sale and Purchase Agreement (SPA) signed between the developer and a purchaser. A project is also classified as abandoned if, within this six month period, the developer has been wound-up and the company taken over by an official receiver or private liquidator recognised or affirmed by the Housing Controller, who is the Secretary-General of MHLG.

MALAYSIAN ABANDONED PROJECT

Project delays are known to affect project cost, workers morale, quality of completed works and the industry's reputation. Modern construction techniques and the use of sophisticated ICT tools on their own do no ensure that a project can be delivered on time. The right level of knowledge, experience, methods and management skills are needed to ensure a greater chance for projects to be completed on or before the deadlines. Delay is a serious problem in the construction industry. It is costly for both owner and contractor. The owner loses by missing out on the potential revenues from the use of the project and by increased overhead cost for contract administration and supervision. The contractor also loses due to increased costs in over-head and tied-up capital. His losses may include lost opportunities for new projects because of diminished financial capabilities. In public projects, the public may also be affected by the delay in the utilization of the facilities and by the extended inconveniences such as traffic disturbances. Delay, therefore, is an important issue to the construction industry. Investigation into this problem area is needed in order to better manage delay situations and to mitigate their consequences. Assessing the frequency of delay, the extent to which delay may occur, and the responsibility for delay can provide insights for early planning to control these factors and improve project performance. Every step prescribed under the Housing Development (Control and Licensing) Act (the Act) is being taken by the Ministry of Housing and Local Government (MHLG) to minimise the number of abandoned housing projects in the country. However, there are unforeseen circumstances



beyond the control of the ministry, such as the Asian financial crisis of 1997-98 and increases in the cost of building materials that have hurt many small housing developers and caused project abandonment. The public relies on this legislation and the enforcers to protect them in their quest for homeownership and many are fed-up with the lack or lax enforcement when problems surfaced. In the past, weak enforcement and monitoring had allowed errant developers to flourish. The previous Prime Minister, Abdullah Badawi was on 22.11.2005 quoted as saying: "If the projects have been monitored on a regular basis from the start, any sign of them being abandoned could have been detected and the projects salvaged" (Please see Table 1).

the 261 projects between 1990 and December 2005 had their licenses issued before the housing law was amended on Dec 1, 2002.

CAUSES OF NON-COMPLETION PROJECT

There are a number of factors behind the abandonment of a housing project:

- i. Finance
- ii. Poor marketing and sales strategies
- iii. Technical problems faced during construction
- iv. Problems caused by compensation demanded by squatters for resettlement.

The MHLG's findings have shown that 118 or 70 per cent of the 168 projects abandoned were due to the financial problems of developers. Another 23 (14 per cent) arose from poor marketing and sales strategies while 27 (16 per cent) failed over problems arising from squatter resettlement, poor company management and disputes between developers and contractors or with landowners (News Tarikh, 2006).

There are financial problems of a developer caused by incidences such as the 1997-98 economic crisis. Crisis within the development company, including disputes between shareholders or embezzlement of progress payment collections, problems involving contractors and even disagreements with landowners are more reasons for abandoned housing projects. There are many reasons why delays occur. They may be due to:

- i. strikes,
- ii. rework,
- iii. poor organization,
- iv. material shortage,
- v. equipment failure,
- vi. change orders,
- vii. Act of God and so on.

In addition, delays are often interconnected, making the situation even more complex (Alkass, 1996). The factors which may give rise to non completion or late completion of projects cannot be exhaustively discussed due to space constraints, so only some are dealt with below. It is the responsibility of the parties to take account of any risk which might distort the completion of the plant, its operation and revenue stream (Dow and Andrews-Speed, 1998). Lenders as well as sponsors need be aware of the events which may endanger the completion of the project and the implication of leaving such factors unabated.

i. Insolvency Of Contractor

The insolvency of a contractor engaged in the construction of housing might mean distortion for the completion schedule. This is particularly an instance where a turn-key contract proves inadequate to mitigate completion risk, unless the contractor's obligation had been guaranteed under a bond by a credit-worthy third party. Although it might not be possible to predict the contractor's state of affairs such as to determine impending insolvency, engaging an experienced, financially responsible and strongly capitalized contractor is a way to mitigate this risk.

ii. Cost Overrun

Cost overrun can arise from so many events which include: an increase in the cost of energy supply for

Table 1. Statistic of Abandoned Housing Project

STATISTIK PROJEK-PROJEK PERUMAHAN BERMASALAH (LEWAT, SAKIT & TERBENKALAI) SEHINGGA FEBRUARI 2009

No.	NEGERI	PROJEK LEWAT			PROJEK SAKIT			PROJEK TERBENKALAI			JUMLAH		
		BIL. PROJEK	BIL. UNIT RUMAH	BIL. PEMBELI	BIL. PROJEK	BIL. UNIT RUMAH	BIL. PEMBELI	BIL. PROJEK	BIL. UNIT RUMAH	BIL. PEMBELI	BIL. PROJEK	BIL. UNIT RUMAH	BIL. PEMBELI
1	PERLIS	3	67	52	2	30	27	0	0	0	5	97	79
2	KEDAH	14	1,301	847	14	2,473	1,502	9	1,445	709	37	5,219	3,058
3	PULAU PINANG	32	4,162	2,415	18	4,123	3,607	10	6,517	4,784	60	14,802	10,806
4	PERAK	52	3,182	1,713	43	3,622	1,925	6	822	597	101	7,626	4,235
5	SELANGOR	39	6,130	3,221	68	21,972	17,998	39	21,733	14,642	146	49,835	35,861
6	WP KUALA LUMPUR	10	2,471	856	9	895	564	6	2,408	1,365	25	5,774	2,825
7	NEGERI SEMBILAN	17	2,276	936	10	1,135	948	20	4,743	2,383	47	8,154	4,267
8	MELAKA	9	510	350	6	1,448	1,033	7	1,109	570	22	3,067	1,953
9	JOHOR	15	1,142	508	30	6,958	5,053	32	9,280	6,419	77	17,380	10,989
10	PAHANG	9	779	181	7	1,000	750	11	3,866	1,972	27	5,645	2,993
11	TERENGGANU	3	261	213	3	52	48	1	21	20	7	334	281
12	KELANTAN	5	193	109	6	286	228	3	519	367	14	998	704
13	SABAH	0	0	0	1	455	45	4	326	260	5	781	305
14	SARAWAK	0	0	0	0	0	0	8	406	288	8	406	288
JUMLAH KESELURUHAN		208	22,474	11,441	217	44,449	33,728	156	53,195	33,376	581	120,118	78,545
PERATUS		36	19	15	37	37	43	27	44	42	100	100	100

Source: Ministry of Housing & Local Government

NOTE: These figures do not include unlicensed and 'commercial' project developers.

Between 1990 and December 2005, a total of 261 housing projects were identified as abandoned by MHLG. These projects totaled 88,410 units, involving 58,685 house buyers for properties valued at a total of RM8.04 billion. Of these, 87 projects were revived and completed by white knights and another six by Syarikat Perumahan Negara Bhd (SPNB). Of the 168 remaining, 149 projects were classified as having the potential to be revived. These contained 63,894 units involving 42,706 buyers and a total sales value of RM5.4 billion. Another 10 projects housing 4,191 units, 2,074 buyers and RM426.2 million in sales value have been taken over by new developers, while nine others involving 2,866 units, 1,364 buyers and RM 335.29 million in sales value were classified as "not viable for revival". Of the total 70,960 units abandoned in the 168 projects, 31,276 are high-cost houses, 18,731 medium-cost and 20,953 low-cost units. The total number of abandoned projects makes up only 1.3 per cent of the 13,286 projects implemented between 1990 and December last year. It must be noted that the developers that abandoned

the construction, transportation cost, labour cost and material cost. Cost overrun may also arise from delay which can give room for inflation. Sometimes, design changes initiated by the owners or the government after the commencement of construction could so gravely invite cost overrun. Recently for instance, Multiplex Construction, the contractor in charge of the Wembley National Stadium in the UK has threatened to sue the clients for £150 Million allegedly being overrun cost it has suffered for the over 560 design changes made by the clients (Rogers, 2006). A power project experiencing cost overrun faces the risk of delay in completion pending the determination of the party committed or obliged to make provision for the overrun cost, unless adequate provisions had been made to salvage such eventuality. Sometimes, this determination emerges after a long and heated litigation process. Also, it could lead to outright non completion by frustrating the furtherance of construction work on the project where the party under obligation for the overrun cost is incapable of providing for it. This is especially so because power project sponsors, are often not as hugely capitalized as their oil counterparts, and in oil there is often resort to a great deal of joint ventures which helps to easily absorb such overrun risk.

iii. Currency Fluctuation

Whenever there is mismatch between one currency against another in a single project for loan disbursement and construction cost, there could arise the issue of currency fluctuation. The construction phase for a conventional plant has an average lead time of at least three years (Beck, 1994); thus within this time; cost overrun could set in arising from an unfavourable fluctuation of exchange rate. An example could be a loan denominated in British Pounds Sterling for which construction contract and machinery accessories are in American Dollars. A devaluation of the Pounds Sterling against the Dollar would mean that more Pounds would be needed to fulfill the completion of the original plan. This was the case in Indelpro polypropylene plant in Mexico, where cost overrun was experienced partly as a result of fluctuation of the Mexican Pesos rate against the American Dollars (IFC, 1999). Thus currency fluctuation is an issue for consideration in mitigating completion risk. Lenders can explore a host of methods, including but not limited to denominating the loan currency in the currency of the technology to be adopted, however where this is not practicable.

iv. Regulatory Changes

There could be delays due to changes in policies, standards and regulations; these could also result in extreme cases of non-completion/cancellation. In the United States (US), majority of the unjustifiable cancellations of nuclear plants were blamed on constraints set in by ever evolving regulatory requirements (Joskow and Schmalensee, 1983). Often, some conditions like requirements to use modern and costly technology, are subsequently imposed which have the effect of eroding the bankability of the

project, and for which the lenders would never have advanced capital had they been put in place from the very beginning. The difficulty has always been borne by parties who had no fault, drawn from the change in government regulation of the enterprise. With ever increasing environmental standards, it becomes even worse to predict what environmental compliance would be required of a power plant by the government. This is a potent risk in view of the long lead times of a conventional power plant. Environmental regulation contributed to the California electricity debacle - it was more cumbersome to get sitting and permitting approvals for new plants than in other US states and also the legal system gave the inhabitants and environmental groups the right to substantially delay the construction of new plants leading to inability to complete plants as scheduled.

v. Contractual Disputes

Disputes may be inevitable whenever parties to a contract have duties and obligations. With the several contracts needed to put a housing project into operation (concession, construction, loan, shareholders, interlenders, power purchase agreement and so on), the non existence of well established institutions and processes for dispute resolution, could lead to delay in completion of a housing project. Court proceedings are often presided over by judges who have no special training in the kind of contracts involved; and could also evidence very extensive delays. This is an area that a lender should not ignore in its objective to see the project completed according to schedule. Arbitration is the easy alternative since it gives the parties the flexibility to frame the process to suit their own peculiar circumstance, but even that is not a final solution in itself since arbitration awards will have to be enforced by a regular court. In India for example, a dispute concerning transfer of technology cannot be a subject of arbitration and the courts will not enforce any such award.

IMPLICATION OF NON-COMPLETION PROJECT

Abandoned housing projects have certain implications on the affected parties. Losses and difficulties faced by house buyers in servicing the interest on housing loans they have taken while paying house rental as well is one. The revival of an abandoned project involves:

- ❖ High capital injection, either by the developer or by other parties interested in reviving the project. This is due to vandalism at the project site, price increases of raw materials and changes in building requirements.
- ❖ Developers also face non-performing loans and land-owners risk their land being foreclosed.
- ❖ There is also, the possibility that a project may no longer be viable for revival or that no company is interested in reviving it. All these mean a loss to the economy.

Non-completion projects have certain implication on the affected parties. Managing and reviving a non-completion project is a complicated affair involving the developer, purchaser, financier, landowner and



other parties. It will take time for all parties to reach a consensus since each parties want to protect their interest. When a single building is faced case of non completion, there is usually a confrontation between these parties. What to do with the project and who has to pay are usually sensitive issues that end up in costly and slow lawsuits. Abandoned buildings also have a significant impact towards socio economics nature and environment. Some closed ended implications are as follows:

i. End user/ house buyers

The consequences of abandoned housing projects are many. Some of them are, first, on part of the purchasers, they surely are unable to occupy the houses on time as promised by the developers in the Sale and Purchase agreement. The construction of the houses are terminated and partly completed which results to the fact that they are useless for occupation for a long duration of time (mostly), unless they could, expeditiously be revived. Apart from the inability to occupy the houses, the purchasers too have to pay monthly installments to their banks. This is pathetic as the purchasers have to part with their monies but they could not get the houses. There are many side effects to home buyers especially those who still do not have their own homes and are forced to rent a house while waiting for the house is completed. They had to bear interest bank loans in addition pay the cost of rental houses while. This is their burden of middle income and low cost of living due to the increasing. There are not uncommon cases, where banks had made the purchasers bankrupt on the ground that they failed to pay monthly installments.

ii. Developers/ clients

Developer or client who is interested in reviving the project was burdened by the high capital injection. This is due to vandalism at the project site, price increases of raw materials and changes in building requirements. They also face non-performing loans and yet the land being foreclosed. Consequently, there is the possibility that the project may no longer viable for revival or there is no company interested to invest in the project. All these mean a loss to the economy. Private sector failures are sometimes solved by the public administration so the transfer of cost happened between private and public sector.

iii. Illegal activities are conducted

Studies showed that abandoned buildings are magnets for crime. First, they provide centres for the pursuit of a range of criminal activities, including prostitution, the consumption and trafficking of drugs, and crimes against property. Evidence of this is found in Spelman's (1993) study of 59 abandoned residential buildings in a low-income Austin, Texas neighborhood. Of these buildings, 34% were being used for illegal activities. Of the 41% of buildings that were unsecured, some 83% were being used for illegal activities (Spelman, 1993). Greenberg and other's (1990) study of TOADS in the 15 largest American cities finds that vacant buildings are frequently used as crack houses, and cites the use of TOADS as locales

for drug dealing as one of the most prominent social ills associated with abandonment. According to Spelman (1993), abandoned buildings are ideal places to trade, conceal, and consume drugs. Activity within them is rarely visible from the street, while police officers are reluctant to enter abandoned buildings for legal reasons, because of general uncertainty and the possibility of danger and because of the low probability of a worthwhile payoff (i.e. slight chance of making an arrest). Evidence of drug use was found in 19% of the abandoned buildings in Spelman's study. Spelman (1993) also finds evidence of sexual activity and prostitution in 20% of the buildings in his study, and evidence of two different types of crimes against property. First, almost all of the unsecured buildings in Spelman's study are found to have been plundered by trespassers. Copper piping and wire, appliances, carpets and furniture are favorite targets. Second, 8% of the buildings in the study are found to be housing goods ranging from wallets to lawn furniture to bicycles stolen elsewhere. Abandoned buildings are not just centres where illegal activities are conducted.

They also provide meeting places where offenders who perpetrate crimes elsewhere can gather, meet and plan their activities. Spelman (1993) suggested that abandoned buildings are well suited for this purpose because they physically shield criminals from the attention of outsiders. He even argues that, used as meeting places, abandoned buildings might actually foster and exacerbate criminal tendencies. This occurs as the lack of the usual social surveillance mechanisms erodes the self-control of those who meet there, while promoting group cohesion and the illusion of invulnerability. A clear association between abandoned buildings and neighborhood crime rates emerges from Spelman's (1993) study. City blocks blighted by unsecured abandoned buildings were found to suffer crime rates (including cases of drug, theft, and violent crimes) that were twice as high as those found in "control blocks" characterized by the absence of abandoned residences. Of course, this is not definitive proof that abandonment fosters criminal activity – perhaps the crime pre-dated and actually caused the abandonment, rather than the other way around. This possibility must be taken seriously because of the evidence that crime causes abandonment in Newman (1980). Spelman (1993) argues, however, that the "crime causes abandonment" thesis is not consistent with the qualitative features of the pattern of abandonment observed in Austin, Texas during the later 1980s. For example, abandoning owners were largely absentee landlords not local residents, who were responding to plummeting real estate prices throughout the region, not block specific characteristics such as crime rates. This provides some indication that the association between abandonment and neighborhood crime rates in Spelman's study is, indeed, explained by the notion that abandonment causes crime.

i. Cost overrun and time overrun

Cost overrun and time overrun (elongation of project duration) were the two most frequent effects of delay in the construction industry. Delay had significant effects on actual project duration. The model relating delay and actual project duration provide a benchmark for future research work in the study of project management in Nigeria and also facilitate comparison with other countries. Loss and expense claims arising from delay and fluctuation claims during the delay period had significant effect on cost overrun. The models provide a benchmark for future research work in the study of project management in Nigeria and also facilitate comparison with other countries. Loss and expense claims arise from ascertained and approved delay caused by the client or his agent. The significant effect of loss and expenses claims on project cost overrun suggests that clients are a significant cause of delay in Nigerian building projects. This corroborates the result of a previous study where client-related delay was found to be significant. Delays in project completion seem to be a perennial problem and the lack of oversight by various ministries and departments in the procurement of goods and services continue to cost the Government hundreds of millions of ringgit. Delays in project completion, work not done in accordance with the original scope of works will increase project costs due to the inclusion of procurement of equipment and assets in the scope of works, unutilised facilities upon completion, improper payments made for works not done and shortage of officers in project supervision. These range from multi-billion ringgit infrastructure projects to the procurement of laptops and maintenance of government assets. For example, Kolej Kemahiran Tinggi Mara Balik Pulau in Penang paid RM 84, 640 for two laptops or RM 42, 320 per laptop and spent RM2.08mil on computer software that was not used, among other things. Then, there is the over RM15mil the Perak government spent on new purchases of cars and maintenance over the past four years and still not being able to manage its vehicles properly.

ii. Dispute and Arbitration

Furthermore, associated delay problems can also result in dispute, arbitration, total abandonment and protracted litigation by the parties. To some extent the contract parties through claims usually agree upon the extra cost and time elongation associated with delay. Nevertheless, this has in many cases given rise to heated arguments between the owner and contractor. The question of whether a particular delay to progress of work warrants an extra cost and or extension of project duration is usually the cause of disagreement. Such situations, usually involve questioning the facts, causal factors and contract interpretation, which have been addressed by (Alkass et al., 1995). In specific terms, Odeyinka and Yusuf (1997) have addressed the causes of delays in Nigeria building projects. Another problem that has been identified is the disagreement prevailing among the

purchasers, bankers, local authorities and the contractors concerned when it comes to revive the abandoned housing projects. This problem is complex as is evident in many cases. Consequently, the projects could or may not be rehabilitated as there is no common consensus among them.

iii. Rehabilitation Problem

Further to aggravate and worsen the situation, in the event there are plans for rehabilitation, the plans and attempts to rehabilitate are not easy. Many impending problems and difficulties, neither subtle nor obvious, would be awaiting the purchasers and the developers. Among the traumatic problems are the impossibility to revive the projects as the projects have been too long overdue without any prospect of reviving and to rehabilitate them, needing additional and substantial costs and expenditure. Cases show that most of the purchasers are reluctant to take additional money out from their own pockets on the ground, 'that it was not their fault', as the 'fault was squarely due to the developers'. 'Thus, the developers concerned should advance their own money to revive the projects'. Matters would not be settled that easy since most of the developers involved do not have enough money, which may be due to poor management or they had calculatedly siphoning off the company's assets and monies through unreasonable directors' allowances and high overhead operating costs. Worst still and of all, most of them have been wound up and the directors have absconded, unable to be traced and contacted.

iv. Delay on completion Time and Delay on Payment

Delays defer income, while interest keeps accumulating. Long delays may result in projects ending up in the so-called 'interest trap' (Flyberg et al., 2004), where a combination of escalating construction costs, delays and increasing interest payments result in cost overrun. According to Arditti et al., (1985), lengthy delays in inflationary environments increase cost overruns tremendously. The overall lack of finance to complete a project, or delays in the payments for services by the project owners or clients can lead to significant problems. If the costs of a project have increased significantly beyond the original estimate, then work on the project may have to be stopped or be delayed until additional funds can be found. Delays on payment may some times provoke the contractor to claim for interest rates. If the payment by a project owner is slow, the contractor may begin to commit fewer resources to a project, and may even cease work if cash flow becomes a problem.

v. Late Site Hand Over or Change of Location of Construction site

Late hand over of construction sites, some times may happen and substantially increase the cost of construction projects. In most international projects in Ethiopia late site hand over is a common form of claim source for compensation for contractors (Girmay, 2003). For example, the Addis Ababa Bolle International Airport Project has suffered an



additional cost of about \$1,000,000.00 USD due to late site hand over (Girmay, 2003). Fortunately, domestic contractors do not ask for compensation due to late site hand over. Sometimes the owner may decide to change the location of the project after the award to the winning contractor. This is a rare phenomenon but it does happen due to sudden and unavoidable circumstances. The change of location of a project might extensively change the entire character of the work that was initially required under the (awarded) contract or the new location of the construction site may have different sub surface condition that may necessitate the structure to be redesigned. In such cases it is rightly alleged that the changes do alter the "general scope of work" and therefore, the final cost of the project might exceed the original contract amount.

vi. Acceleration Costs

Acceleration occurs when a project has been delayed, yet the owner demands that the contractor completes the contracted work before the contract completion date, or agreed upon changed completion date, or when the contractor wants to complete early. When acceleration occur the contractor typically will incur additional direct and indirect costs. While direct costs are relatively easy to quantify, indirect costs are difficult to identify and quantify (William, 2002). If the contractor establishes a valid acceleration claim, it is entitled to recover the costs incurred. These costs may include increased mobilization and demobilization costs due to the need to commit additional resources in terms of labor, equipment and supervision at the project than originally contemplated by the original schedule; specifically, direct labor costs include such items as increased wage costs for additional workers, overtime pay and rental costs for additional equipment. Further, the contractor may incur additional costs for inefficiencies in labor. These inefficiencies may include congestion or fatigue from extensive overtime work. Labor inefficiencies are a hidden but very expensive cost of acceleration. Nevertheless, while labor inefficiencies are a very real part of an acceleration cost, they are extremely difficult to quantify.

vii. Environmental impacts:

Visual impact: View quality is partially dependent on relatively unchanging landscape elements like mountains or valleys; views are also affected by more readily altered landscape features, particularly built structures such as buildings (Miller, 2001). In case of abandoned buildings view quality can be seriously deteriorated, especially if towering over flat coastal areas where the visual field is wide and open. Puntillo Del Sol building (Tenerife) is composed of two enormous unfinished and badly preserved fifteen-storey buildings. Its dilapidated appearance and its location at the top of a cliff generate a huge negative visual impact (CIEM, 2003). Similar visual impact has Azaña Hotel, also in Tenerife, a twenty-storey building seriously deteriorated. In these and other cases, and in accordance with Kearny et al., (2008),

the existing regulations do not meaningfully reflect general public attitudes regarding visual impacts.

viii. Landscape modification.

The original topography is significantly changed once urbanisation process starts. Waste soils, gravels and residues, temporary soil piles on construction sites, vegetation elimination and asphalt cover are common actions during urbanisation. These processes change progressively the especially sensitive coastal landscapes. Once the coastal stretch has become superficially indistinguishable from the rest of the hinterland's landscape in terms of vegetation and apparent sedimentary inactivity, development pressures and the absence of strict planning controls leads to encroached urbanisation in a number of prime locations. For instance Costa Esury housing development, in Huelva, consists of 2,184 houses (half of them under construction), two shopping malls, hotels and two golf courses. All of the latter elements are also under construction. The current bankrupt situation of the building company has paralysed the works. Up to date the landscape has changed drastically, and what before was riverside land nowadays is half-built housing development.

ix. Erosion

At most locations, the occupation of the back-beach by infrastructural work has affected the littoral dynamics in a predictable way. The back-beach, which had previously been effective as a coastal defense feature through the provision of protection in rare severe wave conditions, became fixed by vegetation during relatively long periods of inactivity. In the most highly urbanised sections of the coastal fringe, the complete elimination of the back-beach as a morphological feature has occurred. Also digging and moving of soil and rocks leave abandoned loose earth and residues. Experimental studies and field investigations show that loose silt and earth piles formed by urban construction can be eroded seriously (Hu et al., 2001). In Lanzarote, the tracks generated thirty years ago during the construction phase of Atlante Del Sol site still remain. These tracks cause severe erosion problems in the area. The vegetation is unable to remain in these conditions as the little forest cover of the soil disappears and the area become more vulnerable to erosion. The deterioration of Puntillo Del Sol Building in Tenerife and its possible collapse are considered serious environmental hazards. It can produce erosive phenomena and affect to the Cabrera precipice and to the inter-tidal space located down the precipice (CIEM, 2003).

x. Biodiversity decrease

As coastal habitat conservation is directly related to species conservation, degradation of coastal areas would end in a decrease of biodiversity. Club Mediterranee de Cadaqués, in Catalonia, is located in the high ecological value area of Cap the Creus, part of the Natura 2000 network and Especial Protected Area. It is the damage to biodiversity and ecological values resulting from the abandoned of the resort what has driven Public Administration to order its

demolition (BOE, 2008). *Atlante Del Sol* is located in an arid area of Lanzarote Island, but despite extreme conditions this area is rich in species of plants (CIEM, 2008). However, due to the fragility of this ecosystem, plants population has decreased in the surroundings areas of the abandoned building due to the erosion process described above.

xi. Pollution

Abandoned buildings usually trigger the creation of uncontrolled and unsupervised garbage disposal. As the case of *Arenales Del Sol Hotel*, in Alicante, this is dirty, full of garbage, an attraction to rats and a focus for illnesses. Besides garbage, half-built housing development may bring other kind of pollution. In *Costa Esuri, Huelva*, some people are currently living without sewage treatment plant. The pollution generated is being noticed downstream the *Guadiana's* river, where organic pollution is increasing. Pollution effects can be summarise as a decrease of water quality for aquatic life and recreational activities, eutrophication, alteration of ecological conditions and increase of illnesses related to water (DHG, 2009).

MEASURES TO PREVENT NON-COMPLETION/ABANDONED PROJECT

These are some of the measures MHLG has taken to prevent housing projects from becoming abandoned:

- ❖ Tightening procedures for issuance of housing development licenses and focusing on a developer's financial capacity;
- ❖ Continuous project monitoring through Form 7f;
- ❖ Regular visits to the project site and developer's premises to counter-check information provided in Form 7f;
- ❖ Exercising greater control over the Housing Development Account to ensure compliance with the Housing Development Regulations;
- ❖ Counter-checking all claims made on the Housing Development Account;
- ❖ Ensuring developers submit their annual audited financial reports;
- ❖ Taking legal action against developers for offences; under the Act and its Regulations; and
- ❖ Allowing licensed developers to apply for the minister's permission to revoke SPAs should they be unable to fulfill their obligations to purchasers.

EFFORT TO REVIVE ABANDONED PROJECT

Since housing projects are abandoned at various stages of construction for a variety of reasons, MHLG has adopted several approaches in the revival process. However, its main role is to:

- ❖ Act as mediator/facilitator to house buyer committees, financiers and developers to determine the direction of the revival scheme;
- ❖ Act as adviser to project revivers (white knights) and other affected parties to ensure their full co-operation and commitment to revive the scheme;
- ❖ Request SPNB to conduct viability studies to revive and complete a project should no other party want to;

- ❖ Allow for winding up of a developer and placing of a project under an official receiver or applying for a court order to appoint receivers and managers, or a white knight to revive it with the consent of the majority of the buyers;
- ❖ Allow a project financier, as debenture holder, to use its powers to appoint receivers to take control, revive and complete a project;
- ❖ Direct a company to assume, control and carry on the business of a developer vide the minister's powers under Section 11 (1) (c) or to use Section 11 (1) (d) to direct a developer to petition the High Court to wind up its business.

STAGES IN REVIVING AN ABANDONED PROJECT

Basically, all abandoned housing projects are first classified as having the "potential for revival". Subsequently, this classification is further streamlined into four categories.

The first category is for abandoned projects newly identified in a particular year. At this stage, MHLG will focus on information gathering and allow for the appointment of a receiver or private liquidator for the developer, with the winding-up petition being served. Thereafter a feasibility study will be conducted on the project. This is normally done one year or more after the project is declared abandoned. It is at this stage that white knights may surface with project revival proposals. The MHLG will act as facilitator, giving advice and guidance to all affected parties.

The third stage in project revival is the selection of a white knight and ensuring all affected parties have reached a consensus on the project revival proposals. At this point, MHLG will act as a coordinator between the white knight and other technical agencies in order to speed up the approval of plans for the project to take off.

The fourth stage is when the contractor is appointed and construction is under way.

PROBLEMS REVIVING ABANDONED PROJECTS

Managing and reviving an abandoned project is a complicated affair involving the developer, purchasers, bridging financier, landowner and other parties. It will take time for all parties to reach a consensus, since each wants to protect its interest. Some of the hurdles MHLG faces in reviving abandoned projects include:

- The involvement of the developer in other business activities or in a company with a diversified business portfolio. Though a Housing Development Account has been opened for the project, the receivers will take stock of all the developer's financial accounts when it goes into receivership. While project revival and debt settlement remain a priority, at times there would be very little left in the account to complete the project and settle liabilities.
- When a developer is wound-up, the master charge is to get the first priority for debt repayment - and it usually wants the project foreclosed.



- Developers also impose conditions in their consent for project revival in order to get returns for the effort they have put in from the parties reviving the projects.
- Some developers don't own the land they are developing, so the rights of the landowners cannot be denied, especially if they have imposed conditions to protect their rights.
- Consultants of developers who are in possession of detailed or amended building plans often refuse to cooperate with receivers or liquidators until their dues are paid.
- Purchasers often insist that the late delivery clause in a SPA be honored, or that no additional payment be imposed on them to revive the scheme.
- Drawn-out court battles against developers by squatters, landowners, bridging financiers or contractors over contractual matters may further delay the revival of a project.

CONCLUSION

The issue of non completion of construction projects is one that has tremendous effects on the industry and economy of the country. From this research, we have identified the implications of non completion of projects from high capital injection, inability to occupy houses on time by the end users, building being subject to crime, cost and time over run, disputes, arbitration and protracted litigation by parties, difficulty in rehabilitation, project delay, increased cost of construction, environmental implications such as altered landscape view, unsightly scenery due to wastes, residues, soils etc, erosion, pollution, biodiversity decrease; socio-economic implications such as unemployment increase, conflicts between the public administration and the private sector, loss of economic value of the project and the area at large, consequential marginalization of the population to unwarranted transfer of cost between private and public sector; and numerous causes of non completion of projects which includes inadequacy of finance, poor marketing and sales strategies, technical problems faced during construction, problems caused by compensations demanded by squatters for resettlement, insolvency of contractor, cost overrun and currency fluctuation amongst others. We have also identified some possible measures towards cropping this problem both from the public and private sector namely: tightening procedures for issuance of housing development licenses and focusing on a developer's financial capacity; continuous project monitoring through Form 7f; regular visits to the project site and developer's premises to counter-check information provided in Form 7f; exercising greater control over the Housing Development Account to ensure compliance with the Housing Development Regulations; counter-checking all claims made on the Housing Development Account; Ensuring developers submit their annual audited financial reports; taking legal action against developers for offences; under the Act and its Regulations; and allowing licensed developers to apply for the minister's permission to

revoke SPAs should they be unable to fulfill their obligations to purchasers.

We observed that there have been efforts made by the government towards reviving abandoned and non completed projects and some problems faced in this course. However, it is important to note that abandoned projects do not benefit the construction industry and has negative effects on the economy of the country and most effectual on the end users. It is therefore, expedient that efforts are made jointly by the public and private sector to crop this problem.

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